

Cover letter for ES&T submission:

Strynar et al, 2015 Identification of novel perfluoroalkyl ether carboxylic acids (PFECAs) and sulfonic acids (PFESAs) in natural waters using accurate mass time-of-flight mass spectrometry (TOFMS)

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Dr. Sedlak,

We would like to submit this manuscript for consideration for publication in ES&T. My co-authors and I have identified a selection of novel perfluorinated ether carboxylic (PFECAs) and sulfonic acids (PFESAs) in surface waters in North Carolina, USA. The discovered species are consistent with the manufacturing of shorter chain poly and perfluorinated compounds with ether oxygen linkages by industrial producers. We have used accurate mass Time of Flight mass spectrometry (TOFMS) along with authentic standards where available for confirmation. As these compounds are novel, authentic standards are scarce. However, TOFMS data coupled with select Q-TOFMS fragmentation patterns are consistent with the proposed structures presented in this manuscript. This along with the detection of a homologous series (+CF<sub>2</sub> or +CF<sub>2</sub>O) and accurate mass fragments, parent compounds and dimers, trimers and tetramers in source support our conclusions.

I have included below several scientist well versed in high resolution mass spectrometry as well as per- and poly-fluorinated compounds to serve as reviewers of this manuscript.

Thank you,

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